



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,240	07/22/2003	Pierre Tequi	T-6119	7571
7590	10/31/2005			
Steven G.K. Lee Chevron Texaco Corporation P.O. Box 6006 San Ramon, CA 94583-0806			EXAMINER COSTALES, SHRUTI S	
			ART UNIT 1714	PAPER NUMBER

DATE MAILED: 10/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/624,240

Applicant(s)

TEQUI ET AL.

Examiner

Shruti S. Costales

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/22/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in the United States of America on July 22, 2003. It is noted, however, that applicant has not filed a certified copy of the foreign priority document EP02291928.6 as required by 35 U.S.C. 119(b).

### ***Information Disclosure Statement***

2. The information disclosure statement submitted on July 22, 2003 was filed in compliance with the provisions of 37 CFR § 1.97. Accordingly, the information disclosure statement filed by the applicant has been considered by the Examiner.

### ***Specification***

3. The abstract of the disclosure is objected to because the applicant makes improper use of legal phraseology, such as "comprising". See MPEP § 608.01(b).

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Applicant is reminded of the proper content of an abstract of the disclosure.

Art Unit: 1714

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Applicant is reminded of the proper language and format for an abstract of the disclosure.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 15-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. More particularly, claim 15 recites the limitations "a major amount" and "an effective...amount", wherein it is not clear to one of ordinary skill in the art which particular amount(s) will meet the requirements of said limitations, thereby rendering the claim indefinite. Claims 16 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being dependent from a rejected base claim.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-7, 10-12, and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salentine (U.S. Patent Number 4,717,490, which was cited on the

Art Unit: 1714

PTO-1449 submitted by the applicant on July 22, 2003) in view of Kawabata et al. (U.S. Patent Number 5,173,202) and *Hawley's Condensed Chemical Dictionary*.

Salentine discloses extreme pressure lubricating oils and alkali metal borate-containing lubricants (Col. 1, lines 8-10). In particular, hydrated particulate alkali metal borates are disclosed having the formula  $M_2O \cdot mB_2O_3 \cdot nH_2O$ , where M is an alkali metal including sodium and potassium, m is a number from 2.5 to 4.5 (both whole and fractional), and n is a number from 1.0 to 4.8, wherein hydrated potassium triborate microparticles are preferred (Col. 1, lines 60-68 and Col. 2, lines 1-15). The mean particle size of the hydrated borate particles is less than 1 microns (Col. 2, lines 12-15). The lubricating oil to which the borate is added is any hydrocarbon-based lubricating oil or a synthetic base oil stock (Col. 4, lines 24-32), therein intrinsically including transmission oil of a lubricating viscosity. The alkali-metal borate comprises 0.1 to 20 weight percent of the lubricant composition (Col. 4, lines 33-34). Other additives that may be added to the composition include dispersants (Col. 4, lines 53-62).

The difference between Salentine and the presently cited claims is the requirement that an oil dispersion of boron nitride is present in a specified weight ratio.

Kawabata, which is drawn to a lubricant (Col. 1, lines 11-15 and Col. 2, lines 44-64), discloses ceramic particles such as boron nitride mixed with lubricating oil, wherein the ceramic particles have a particle size of 0.5 microns or less (Col. 1, lines 17-22 and Col. 2, lines 19-31). Although one of the types of ceramic particles includes zirconium oxide, which is used in the Examples (Col. 3, lines 19-21 and Col. 3, lines 39-68), as mentioned above the ceramic particles may also include boron nitride as an alternative

Art Unit: 1714

to zirconium oxide. It is to be noted that according to *Hawley's* boron nitride has a hexagonal platelike structure, therefore Kawabata's boron nitride is intrinsically hexagonal. The amount of the ceramic particle used is 20 wt% (60 grams/300 grams) as disclosed at Col. 3, lines 39-68. The test car driven with the lubricating oil of Kawabata has a manual transmission (Col. 3, lines 67-68). It would have been obvious to one of ordinary skill in the art to use Kawabata's boron nitride in Salentine's lubricant because reduction of friction is achieved, resistance to physical or chemical degradation is achieved, and reduction of resistance produced by contacting parts which will be resistant to solvents, heat, abrasion, pressure, and oxidation is achieved (Col. 2, lines 9-14), wherein such a composition corresponds to that presently claimed therein intrinsically meeting the requirement of reducing synchronizer sticking, thereby obtaining the invention as set forth in the presently cited claims.

8. Claims 8, 9, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salentine in view of Kawabata and *Hawley's* as applied to claims 1-7, 10-12, and 14-17 above, and further in view of Chrisope et al. (U.S. Patent Number 5,360,562).

The difference between Salentine in view of Kawabata and *Hawley's* and the presently claimed invention is the requirement that the borate oil dispersion includes a detergent and the boron nitride oil dispersion includes a surfactant.

Chrisope is drawn to a composition possessing high shear stability (Col. 1, lines 15-34) wherein the composition includes base oils (Col. 3, lines 20-46), boron containing extreme pressure agents (Col. 7, lines 14-68; Col. 8, lines 1-68; Col. 9, lines



Art Unit: 1714

1-68 and Col. 10, lines 1-27), and other additives (Col. 10, lines 30-68 and Cols. 11-12). Chrisope discloses surfactants (Col. 11, lines 44-47), wherein the surfactant would intrinsically function as a stabilizer. Detergents (Col. 12, lines 9-14) are also disclosed, wherein the detergent is present in an amount of 0.90 wt% (Examples with phenate compounds that are used as detergents in Chrisope). It would have been obvious to one of ordinary skill in the art to use Chrisope's surfactants and detergents in the composition of Salentine in view of Kawabata and *Hawley's* because the resulting composition possesses excellent shear stability (Col. 21, lines 36-40), thereby obtaining the invention as set forth in the presently cited claims.

### ***Double Patenting***

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 1-10 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 10-19 of copending Application No. 10/738,388, published as U.S. Pre-Grant Publication Number



Art Unit: 1714

2005/0119134. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following explanation.

The cited claims of '388 recite an additive composition for a transmission oil comprising an oil dispersion of hexagonal boron nitride, a viscosity index improver, and an oil dispersion of hydrated alkali metal borate. '388 also recites that the hydrated alkali metal borate is hydrated potassium triborate. The additive composition of '388 further includes a dispersant and a detergent.

The difference between the cited claims of '388 and claims 1-10 of the present invention is the requirement that the weight ratio of the hydrated alkali metal borate to the hexagonal boron nitride is in the range of about 95:5 to about 5:95.

The presently cited claims of '388 recite the weight ratio of the oil dispersion of hexagonal boron nitride to the viscosity index improver is in the range of from 99:1 to about 1:99. Further, claim 19 of '388 recites that the oil dispersion of hydrated alkali metal borate is present in the additive composition in the range of from about 10 to 90 wt%, based on the total weight of the additive composition. As the amounts of the hexagonal boron nitride and the hydrated alkali metal borate are recited in a broad range, the presently recited weight ratio would at least partially be intrinsically included by claims 10-19 of '388, thereby obtaining the invention as recited in the presently cited claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

11. Claims 1-10 are directed to an invention not patentably distinct from claims 10-19 of the commonly assigned copending application, namely copending 10/738,388. Specifically, refer to the discussion above in paragraph 10.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP § 2302). Commonly assigned copending Application No. 10/738,388, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications filed on or after November 29, 1999.

### ***Conclusion***

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shruti S. Costales whose telephone number is (571)

Art Unit: 1714

272-8389. The examiner can normally be reached on Monday - Friday, 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

*SSC*  
Shruti S. Costales  
October 25, 2005

*Vasu Jagannathan*  
VASU JAGANNATHAN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700